

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for concentrating a solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution; and

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed solvent,

~~wherein providing said concentrating tank includes with a tank main body body, for containing said solution solution, and with a roof disposed on said tank main body, and~~

~~providing an inclined inner surface of on said roof forms to form~~ a condensing surface for condensing and recovering said solvent gas.

2. (canceled).

3. (currently amended): A method as claimed in claim 1, ~~wherein further comprising the step of attaching a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface.~~

4. (currently amended): A method as claimed in claim 3, ~~wherein a temperature of further comprising the step of maintaining said inner surface of said roof is at a temperature lower than that of said solution in said tank main body.~~

REQUEST FOR RECONSIDERATION AND AMENDMENT...
U.S. APPLN. NO. 10/634,848

5. (currently amended): A method as claimed in claim 4, wherein further comprising the step of attaching a draining pipe ~~is attached to~~ a bottom of said tank main body for draining said concentrated solution from said concentrating tank.

6. (currently amended): A method for concentrating a solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution; ~~and~~

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed solvent,

~~wherein inserting in~~ said concentrating tank ~~includes~~ at least one flash nozzle ~~inserted into said tank main body~~, and

disposing said at least one flash nozzle ~~is disposed~~ under a liquid surface of said solution in said concentrating tank so as to discharge a fresh solution into said concentrated solution.

7. (previously presented): A method as claimed in claim 5, further comprising a step of: preserving a height of said liquid surface of said solution in said tank main body to a constant value.

8. (currently amended): A method as claimed in claim 7, ~~wherein the temperature of~~ further comprising the step of maintaining said solution in said tank main body ~~is at a~~ temperature lower than a boiling point of said solvent.

9. (original): A method as claimed in claim 8, wherein residence time of said solution in said concentrating tank is from 0.5 minute to 20 minutes.

REQUEST FOR RECONSIDERATION AND AMENDMENT...
U.S. APPLN. NO. 10/634,848

10. (previously presented): A method for concentrating a solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution,

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed solvent,

wherein said concentrating tank includes a tank main body for containing said solution and a roof disposed on said tank main body, and an inclined inner surface of said roof forms a condensing surface for condensing and recovering said solvent gas,

wherein a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface,

wherein a temperature of said inner surface of said roof is lower than that of said solution in said tank main body,

wherein a draining pipe is attached to a bottom of said tank main body for draining said concentrated solution from said concentrating tank.

wherein said concentrating tank includes at least one flash nozzle inserted into said tank main body, and said at least one flash nozzle is disposed under a liquid surface of said solution in said concentrating tank so as to discharge a fresh solution into said concentrated solution,

said method further comprising the step of:

preserving a height of said liquid surface of said solution in said tank main body to a constant value,

wherein the temperature of said solution in said tank main body is lower than a boiling point of said solvent,

wherein residence time of said solution in said concentrating tank is from 0.5 minute to 20 minutes,

wherein said solution is previously filtrated with a primary filtration apparatus, said concentrated solution drained from said concentrating tank is filtrated with a secondary filtration apparatus, a differential rate R_v of filtration amount between said first and secondary filtration apparatus is at most 50%, and said differential rate R_v is calculated from a following formula:

$$R_v (\%) = \{(V1-V2)/V1\} \times 100;$$

wherein $V1$ is mass of said solute in said solution filtrated through a unit size of said primary filtration apparatus, before a first filtration pressure of said solution flowing in said primary filtration apparatus becomes to a first predetermined value, and

wherein $V2$ is mass of said solute in said concentrated solution filtrated through a unit size of said secondary filtration apparatus, before a second filtration pressure of said concentrated solution flowing in said secondary filtration apparatus becomes to a second predetermined value.

11. (previously presented): A method as claimed in claim 5, wherein said solute contains polymer.

12. (original): A method as claimed in claim 11, wherein said polymer is cellulose acylate.

13. (original): A method as claimed in claim 11, wherein a polymer concentration of said concentrated solution is from 12 wt.% to 40 wt.%.

14. (original): A method as claimed in claim 13, wherein a polymer concentration of said solution is from 5 wt.% to 30 wt.%.

15. (original): A method as claimed in claim 11, wherein a difference of the polymer concentration between said solution and said concentrated solution is from 1 wt.% to 15 wt.%.

16. (original): A method as claimed in claim 15, wherein viscosity of said concentrated solution is from 1 Pa·s to 200 Pa·s.

17. (original): A method as claimed in claim 16, wherein viscosity of said solution is from 0.1 Pa·s to 100 Pa·s.

18. (original): A method as claimed in claim 15, wherein temperature of said concentrated solution is from 20 °C to 70 °C when said concentration solution is drained from said concentrating tank.

19. (previously presented): A method as claimed in claim 18, wherein the temperature of said solution is from 50 °C to 180 °C when said solution is discharged from said at least one flash nozzle.

20. (original): A method as claimed in claim 15, wherein absolute pressure of gas above said solution surface in said concentrating tank is from 500 hPa to 1100 hPa.

21. (previously presented): A method as claimed in claim 20, wherein when said solution is discharged from said at least one flash nozzle, the pressure of said solution is at least the

saturated vapor pressure at the temperature of said solution, and at most 5 MPa higher than the saturated vapor pressure.

22. (previously presented): A method as claimed in claim 15, wherein said concentrated solution has a gas content of from 1 mg/L to 200 mg/L.

23. (previously presented): A method as claimed in claim 15, wherein the gas content in said solution is from 10 mg/L to 500 mg/L.

24. (previously presented): A method as claimed in claim 15, further comprising the step of producing a polymer film from said concentrated solution.

25.-26. (canceled).

27. (currently amended): A method for concentrating a solution in which a solute is dissolved in a solvent, comprising steps of:

generating a solvent gas from said solution in a concentrating tank to concentrate said solution,

condensing said solvent gas in said concentrating tank to recover said solvent gas as a condensed solvent,

wherein said concentrating tank includes a tank main body for containing said solution and a roof disposed on said tank main body, and an inclined inner surface of said roof forms a condensing surface for condensing and recovering said solvent gas,

wherein a gutter is attached near a lower end of said roof to said tank main body so as to receive and recover said condensed solvent flowing downwards on said condensing surface,

wherein a temperature of said inner surface of said roof is lower than that of said solution in said tank main body,

wherein a draining pipe is attached to a bottom of said tank main body for draining said concentrated solution from said concentrating tank.

wherein said concentrating tank includes at least one flash nozzle inserted into said tank main body, and said at least one flash nozzle is disposed under a liquid surface of said solution in said concentrating tank so as to discharge a fresh solution into said concentrated solution,

wherein said solute contains polymer,

wherein a difference of the polymer concentration between said solution and said concentrated solution is from 1 wt.% to 15 wt.%,

said method further comprising the step of producing a polymer film from said concentrated solution,

wherein said polymer film is cut in a widthwise direction to five film samples having a area of 5 cm^2 , and an average number of light point defects having a size of at least $20 \mu\text{m}$ is zero on the film sample, having a size of at least $10 \mu\text{m}$ and less than $20 \mu\text{m}$ is a maximum of 10, and having a size of at least $5 \mu\text{m}$ and less than $10 \mu\text{m}$ is a maximum of 10.

28. (previously presented): A method as claimed in claim 24, further comprising the step of producing from said polymer film a protective film for a polarizing filter.

29. (previously presented): A method as claimed in claim 28, further comprising the step of producing from said polymer film an optical compensation sheet.

30. - 32. (canceled).

REQUEST FOR RECONSIDERATION AND AMENDMENT...
U.S. APPLN. NO. 10/634,848

33. (currently amended): The method as claimed in claim 1, wherein further comprising
the step of providing said inclined inner surface of said roof contains with grooves.